

5.8  $\mu$  and occasionally larger, more or less pedicellate, slightly curved, spindle—or sickle-shaped, 5-septate conidia  $42 \times 4 \mu$ , lacks chlamydospores.

The culture has been deposited in the herb. I.M.I. No. 172171.

The authors are thankful to the Director, Commonwealth Mycological Institute, Kew, England, and his staff for their generous help in the identification and comments on the specimens.

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#### Efficacy of Resorantel (Terenol) Against Paramphistomiasis in Goats and Calves

Paramphistomiasis is considered to be a serious helminthic problem of Indian ruminants (Varma, 1957). The natural outbreaks of the disease in Bihar are often encountered particularly in flood affected areas every year, after rains from October to March. Large number of drugs has been tried for its treatment. The efficacy of Resorantel has been assessed in this note.

In the month of January, 33 goats 3 months of age were purchased from Patna for some experimental work but within a week these animals started showing symptoms of diarrhoea and bottle jaw. Within a week, 13 animals died and post-mortem examination revealed numerous immature and mature paramphistomes in the rumen, abomasum and duodenum assignable to *Corylophoron* spp. The remaining 20 animals showed similar typical symptoms of Paramphistomiasis. Faecal samples of all these animals were examined and 12 of them were positive for paramphistome eggs. To these 20 animals, a single dose of Resorantel, 2, 6-dihydroxybenzoic acid-4'-bromanilide (Terenol)\* was given. One ml suspension prepared from 9 g of the Resorantel powder in 100 ml water was administered per kg body wt. *per se* in the morning before feed (about 65 mg/ml active substance). Treated animals were observed daily for 30 days and weekly weight was recorded. After a week faecal samples of all the animals were found completely negative for paramphistome eggs. Weekly weight showed a gain of 0.3 to 0.8 kg per animal. After the

treatment, there was marked improvement in the general conditions of all the experimental animals and these recovered completely.

The drug was also tried on calves. Ten clinically positive cases of Paramphistomiasis were selected from an outbreak of the disease from Muzafferpur (Bihar) and were treated with Resorantel in similar doses. The animals were observed for a month and except 2, all calves recovered completely.

These observations suggest that Resorantel (Terenol), so far a cestocidal drug is also effective against Paramphistomiasis in goats and calves and this finding confirms the work of Gaenssler (1974) on *Paramphistomum microbothrium* in South Africa.

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\* Product of M/s. Hoechst AG and Behringwerke, Germany, made available by the kind courtesy of Dr. B. N. Sahai, Bihar Veterinary College, Patna.

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#### Two New Records of Clupeid Fishes, *Ilisha kampen* and *I. sirishai* from the Arabian Sea

*Ilisha kampeni* was originally described<sup>1</sup> as *Pellona kampeni* from Java and Borneo. Norman<sup>2</sup> recorded this species from Madras, based on a single specimen in the British Museum, but it has been identified as *Ilisha megaloptera* by Whitehead (*in-litt*). Recently *I. kampeni* has been recorded for the first time from the Bay of Bengal by the present author<sup>3</sup>. The species is now being recorded for the first time from the Arabian Sea based on 140 specimens collected at Bombay in January 1975 and identified as described earlier<sup>3</sup>; body depth 26.3-29.5 in % of S.L., D 16-18, P 14-16, V 7, A 42-45; gillrakers 10-11 + 21-23, scutes 18-20 + 8-9 (total 26-28). The large number of specimens show that the species is abundant in the region.

*Ilisha sirishai* has been described as new from Visakhapatnam on the east coast<sup>4</sup>. The species can be identified by the characters described earlier<sup>4</sup>; swimbladder without post-coelomic extension; body depth 30.0-35.35.2 in % of S.L., D 17-18, P 15-17, V 7, A 38-44; gillrakers 10-14 + 24-27, scutes 18-20 + 9-10 (total 27-29). This species is now being recorded from Cochin based on 5 specimens (June 1973), and from Bombay based on 3 specimens collected during January 1975.

I am thankful to C. S. Rao, Indian Institute of Technology, Powai, Bombay, and to the Research Officer, Taraporewala Marine Biological Station, Bombay, for their help in the collection of specimens.

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#### Insect-pollination in Ber (*Zizyphus mauritiana* Lamk.)

Ber fruit contains appreciable amounts of vitamins 'A', 'B' and 'C'. It has more protein, calcium and vitamin C as compared with apple. The caloric value per 100 gm of the fruit has been reported to be 55 and it has 75-150 mg of vitamin C per 100 gm of the fresh fruit<sup>2</sup>.

The flowers of the Ber are cross-pollinated. Because of its pollen being heavy and thick in

nature, insects like the honeybees (*Apis* spp.) and the house fly (*Musca domestica*) have been reported to play an important role in its pollination<sup>1,3</sup>. The present author while conducting survey on the insect-pests of forest trees during August-November, 1974 observed the yellow wasp, *Polistes hebraeus* (Fabricius) visiting ber flowers. This pollinator was abundant throughout the flowering period of this stone fruit and showed its maximum activity between 12-2 P.M. daily. It visited 18 flowers per minute. It is thus a new addition to the list of insect-pollinators of Ber already reported.

It is concluded that *P. hebraeus* may not be considered as a nuisance but an important pollinator of the Ber and its nests near or in the Ber orchards should not be destroyed.

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## REVIEWS AND NOTICES OF BOOKS

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**Gene and the Genetic Code: The Chemical Basis of Life.** By J. D. Cherayil. (Tata McGraw-Hill Publishing Company New Delhi-49), 1974. Pp. 187. Price Rs. 24.00.

Although Watson and Crick postulated the double helical structure for the genetic material DNA in 1953, this discovery did not have the immediate impact it should have. With the recognition of this work by the award of Nobel Prize (for Physiology and Medicine) in 1962, there was a sudden explosion in knowledge of the chemical basis of genetics and a new branch of science, molecular biology, came into existence. In less than 5-10 years the finer details of the genetic code, protein biosynthesis, etc., were worked.

In this book of 187 pages Dr. Cherayil tells us the story of these exciting developments. The book is divided into 8 Chapters—Introduction; Concept of the Gene; Gene and Protein; Chemical Nature of the Gene, Nucleic Acids and Proteins; Deciphering the Genetic Code; Mechanism of Nucleic Acid Biosynthesis; Mechanism of Protein Biosynthesis; Other Functions of the Gene. Each Chapter is self-contained with its own bibliography.

The book is written in a simple and lucid style. The concepts are stated clearly. It is also happily free from many printing and grammatical errors; the reviewer found only one or two printing errors and a single grammatical error—more simpler—on p. 47.

The effort of the author to pack as much information as possible into this little book has resulted in a scanty treatment of certain topics. Chapter 5 on deciphering the genetic code in some places sounds like a dictionary of scientific words in molecular biology. This has also lead to juxtaposition of certain statements which do not follow a logical order. Further, in his effort to explain certain concepts in clear terms, he has repeatedly used the phrase "in other words" which has a jarring effect. There are a few loose statements such as the one on p. 27 on the net charge on a protein molecule and the one on p. 57 on the secondary structure of a protein.

The book covers adequately all the aspects of the gene and the genetic code. However, the reviewer wishes that a chapter on genetic engineering, at least on the possibilities and limitations, had been added;